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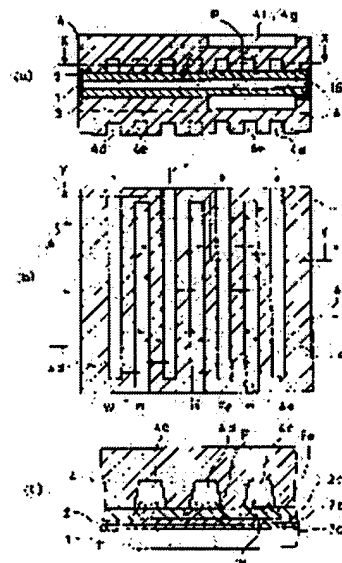
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(54) INTERNAL STRUCTURE OF FUEL CELL FOR SUPPLY AND EXHAUST OF REACTION GAS

(57)Abstract:

PURPOSE: To increase the utilization efficiency of the electrode surface area by making an area of the electrode surface touching a reaction gas supply path and a reaction gas exhaust path permeable to gas and causing reaction gas to permeate from the reaction gas supply path to the reaction gas exhaust path through the gas permeable area.

CONSTITUTION: Fuel gas grooves 4d and 4e are formed on the lower surface of a separator 4. They are all linear paths with closed ends. A fuel gas electrode 2 consists of a three-layered sheet. of the three layers of the fuel gas electrode 2, a hydrophilic layer 2a touching a matrix layer 1 containing electrolyte does not contain a water-repellent material and has a porosity advantageous to liquid permeation, and the active layer 2b is permeated by electrolyte. A gas permeable layer 2c has high permeability. Fuel gas (F) in the grooves 4d easily diffuses into the active layer 2b to participate in electrochemical reaction for power generation. Fuel gas which has not been used for electrochemical reaction flows into exhaustion grooves 4e and then, together with reaction product (W) occurring in the active layer 2b, is led outside the cell through the exhaustion grooves 4e.



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